

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION**

UNITED STATES OF AMERICA,

Plaintiff,

v.

DEANDREA WILLIAMS

Defendant.

Case No. 19-CR-00282

Judge John Robert Blakey

**MEMORANDUM OPINION AND ORDER**

This case comes before the Court upon Defendant's motion for leave to file a *Daubert* motion seeking to exclude the Government's Ballistics/Toolmarks Expert, [98], pursuant to *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993); *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999); and Federal Rule of Evidence 702. Relatedly, at the Final Pretrial Conference, Defendant also made an oral objection to the shell casing evidence which forms part of the basis of the proffered expert opinion. The parties argued the oral motion (and rested on the papers as to the *Daubert* motion), and the Court took the issue under advisement. On August 22, 2025, the parties further discussed the shell casing evidence at a Court hearing, and the Court ruled on the motions that day. [110]. This opinion constitutes the Court's written findings for its decision.

For the reasons explained below, the Court denies Defendant's oral motion to exclude the shell casing evidence, and it also denies Defendant's motion for leave to file, [98], and, in the alternative, denies on the merits, the motion to exclude under *Daubert*, [98-2].<sup>1</sup>

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<sup>1</sup> On 8/11/2025, Defendant filed a Motion for Leave to File *Daubert* motion, [98], which the Government chose not to oppose, [101] at 1 n.1. While this Court may, in its discretion, allow untimely motions to suppress evidence before trial, it should do so "only if the moving party shows good cause." *United States v. Young*, 955 F.3d 608, 615 (7th Cir. 2020); Fed. R. Crim. Pro. 12(b)(3)(C); (c)(3). In this case, defense counsel first raised the issue of filing a potential *Daubert* motion with the Court more than a year ago [91] (status hearing dated 7/1/2024) and was given leave to do so, but then defense counsel failed to file any such motion until 8/11/25, only two weeks before trial and after the deadline set by court order. See, *Standing Order and Procedures for Criminal Cases (including Pretrial Memorandum and Motions) for Judge John Robert Blakey* ("any challenges to expert testimony or evidence must be made within the motions in limine" and MILs "must be filed by the date ordered by the Court, or if no date has been set, then any such motions in limine must be filed at least ten business days prior to the

## I. Defendant's Objection to Shell Casing Exhibit(s)

In this case, the parties dispute the admissibility of certain shell casing exhibits and related evidence. Specifically, at the August 18, 2025 Final Pretrial Conference, and again at the August 22, 2025 Status Hearing, the Government confirmed that it intends to offer evidence about a November 22, 2016 shooting incident in which Defendant was shot in the leg by an unknown individual and officers recovered shell casings from the ground in the proximity of where Defendant was located when he was shot. [100] Tr. 52; [110] Hearing Transcript. In addition to these shell casing exhibits, the Government also intends to offer expert testimony that the recovered shell casings matched shell casings fired from a gun later recovered on August 15, 2018, via a search warrant executed on a residence associated with the Defendant (8015 South Ingleside Avenue, Apartment 2A in Chicago, Illinois).

The Government alleges that Defendant resided at that location on August 15, 2018, and constructively possessed the firearm recovered at the time of the search. In support, the Government proffers evidence including: (1) Defendant's statement to police that he lived at 8015 South Ingleside Avenue; (2) a keychain on his person with keys to the car Defendant drove and keys that opened the doors to the 8015 South Ingleside apartment; (3) observation by law enforcement of a vehicle registered to Defendant's mother (who was deceased) parked at the search warrant location; (4) and identification documents found in the 8015 South Ingleside bedroom that included Defendant's Illinois ID card, his Social Security card, his birth certification, and a rental lease agreement listing: the Defendant's name (as "Lessee Tenant"), his Social Security number, and his Driver License Number. See [110] Hearing Transcript.

Based upon such evidence, and consistent with the firearm offenses charged in Count Four of the Indictment, the Government contends that Defendant knowingly possessed the recovered firearm when he shot it on November 22, 2016 (the day of

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Final Pretrial Conference"). In the intervening year, Defendant also failed to file any motion for extension of time or otherwise communicate with the Court about any obstacles to filing the motion timely. In the request to file an untimely motion, [98], defense counsel merely lists work done in other cases but fails to show good cause or otherwise explain why the *Daubert* motion could not be filed on time. Based on the record and in the absence of a good cause showing, this Court denies Defendant's motion for leave to file, [98] and denies Defendant's *Daubert* challenge as untimely. Given the importance of the issue, however, this Court also rules, in the alternative, that Defendant's *Daubert* motion, [98-2], fails on the merits, for the reasons discussed below.

the shooting incident), and when he constructively possessed it on August 15, 2018 (the day of the search warrant).

In response, the Defendant moves to exclude the shell casings on relevance grounds and under Rule 403. Fed. R. Evid. 402, 403. Neither objection, however, warrants exclusion of the evidence.

First, as to relevance, the parties agree that the shell casing evidence recovered on November 22nd can only be relevant to show Defendant possessed the gun that day, if and only if, the Government can somehow tie those shell casing to him. [110] Hearing Transcript.

Defendant claims that the Government cannot show he possessed the gun on November 22, 2016, since it does not proffer any witness testifying that they personally saw Defendant shooting or otherwise possessing the gun from which the shell casings came, and thus the shell casings lack any relevance under Federal Rule of Evidence 402. Specifically, Defendant notes no gun was recovered from the November 22nd shooting incident, and neither Defendant, nor his girlfriend Rosetta Hale, stated that Defendant had a gun; and instead, they both claimed to police that the Defendant was the *victim* of the shooting, not a perpetrator. Therefore, according to Defendant, the proffered evidence does not offer a sufficient basis to show the relevance of the shell casings in deciding whether the Defendant possessed the gun on November 22, 2016.

Relying on circumstantial evidence, however, the Government cites both the proximity of the recovered shells to the Defendant's location on scene and, more importantly, the ballistic match of those shell casings to the subsequent recovery of a firearm found in an addressed tied to the Defendant.

Defendant, in turn, disputes his ties to the search warrant residence and thus disputes that his alleged constructive possession of the firearm, which was later ballistically matched to the prior shooting incident.

Clearly, based on the record, the "relevance" (and thus admissibility) of the shell casings depends upon a conditional fact, that is, whether there is sufficient evidence of Defendant's constructive possession of the recovered firearm to tie him to the recovered shell casings via ballistics. *See* Fed. R. Evid. 104(b) ("When relevance of evidence depends on whether a fact exists, proof must be introduced sufficient to

support a finding that the fact does exist. The court may admit the proposed evidence on the condition that the proof be introduced later.”).<sup>2</sup>

In assessing conditional admissibility under Rule 104(b), the trial court “neither weighs credibility nor makes a finding that the Government has proved the conditional fact by a preponderance of the evidence.’ The court’s role is to examine the evidence to determine whether the jury could reasonably find the conditional fact by a preponderance of the evidence.” *United States v. McGraw*, 62 Fed. App’x 679, 681 (7th Cir. 2003) (quoting *Huddleston v. United States*, 485 U.S. 681, 690 (1998)); see also *United States v. Cardera*, 842 F.3d 959, 984 n.7 (7th Cir. 2016) (“The judge makes a preliminary determination whether the foundation evidence is sufficient to support a finding of fulfillment of the condition. If so, the item is admitted.”) (quoting Fed. R. Evid. 104(b), 1972 advisory committee note to subsection (b)). The court may rely upon circumstantial evidence for its finding, see *McGraw*, 62 Fed. App’x at 682, and the evidence may be admitted even if the evidence suggests more than one conclusion regarding the condition. See *Cardera*, 842 F.3d at 984 (holding that “district court did not ‘abuse its discretion in finding that the government had presented at least some evidence that the” condition had been met) (citing *United States v. Carrera*, 259 F.3d 818, 829 (7th Cir. 2011)) (emphasis in original).

Here, the shell casings are conditionally admissible if the Court determines that a reasonable jury could find by a preponderance of the evidence that Defendant constructively possessed the gun on August 15, 2018. Viewing the whole record, the Government has proffered a sufficient foundation for a reasonable jury to find this condition by a preponderance of the evidence. While Defendant argues he did not reside at 8015 South Ingleside when the search occurred, the proffered evidence noted above remains sufficient for a reasonable jury to conclude that Defendant lived at the residence and that he constructively possessed the recovered gun.<sup>3</sup> As such, this Court denies the oral motion to exclude the shell casing exhibits as irrelevant on a pretrial basis.

The Court now turns to Defendant’s objection under Rule 403. If the jury finds that Defendant constructively possessed the firearm on August 15, 2018, the shell casings constitute highly probative evidence of his possession on November 22, 2016, as charged in Count Four. Any danger of unfair prejudice remains significantly outweighed by this probative value, and the Court can address any potential danger

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<sup>2</sup> At the status hearing on 8/22/25, the Government conceded that the shell casing could not be admitted based solely upon their proximity to the Defendant’s location on November 22, 2016. [110] Hearing Transcript.

<sup>3</sup> The jury, of course, could also view the evidence and reach the opposite conclusion, but, in any case, the question remains one for the jury, armed with proper legal instructions from the Court. *Cardera*, 842 F.3d at 984.

of unfair prejudice with limiting instructions directing the jury to consider the evidence only for its proper purposes.

Accordingly, the Court denies Defendant's motion to exclude the shell casing evidence both on the grounds of relevance and 403, and it will permit the Government to conditionally admit the shell casing evidence under 104(b). The parties shall meet and confer regarding: (1) any proposed limiting instructions to address the purposes for which the evidence may or may not be used consistent with 403 concerns; and (2) proposed jury instruction(s) addressing the conditional admissibility of the casing evidence itself. The parties shall submit any proposed instructions to the Court by 9 a.m. on Tuesday, August 26.

## **II. *Daubert* Motion**

As noted above, the Defendant attempted to file an untimely motion to exclude the Government's Ballistics/Toolmarks Expert under *Daubert*, and Federal Rule of Evidence 702. Beyond its untimeliness, the motion fails on the merits and thus it is denied, as explained below.

### **a. Request for *Daubert* Hearing**

The Court may exercise its discretion and admit expert testimony without conducting a *Daubert* hearing. *Kumho Tire*, 526 U.S. at 152–53. In this case, even though Defendant initially asked for a *Daubert* hearing in his motion, [98-2] at 11, Defendant later conceded at the Final Pretrial Conference that he did not require a hearing on a motion; and instead, he agreed to proceed based solely upon the parties' written submissions. [100] Tr. at 80.<sup>4</sup> Thus, the prior request for a hearing is moot, and this Court rules based on the parties' written submissions.

### **b. Proposed Firearms and Toolmarks Identification Testimony**

Firearms/toolmark identification constitutes a forensic discipline in which examiners seek to evaluate, through comparison, whether an evidentiary sample is or is not associated with a source sample. The Association of Firearms and Toolmark Examiners ("AFTE"), a professional organization for practitioners of firearm and toolmark identification, has developed a theory that an examiner's identification

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<sup>4</sup> Even if Defendant had not withdrawn his request for a *Daubert* hearing, the Court would have found no need for a hearing based on the record. The issue raised by Defendant in his motion has been litigated extensively in district courts around the country, including this district. *See infra*. Part II.c. Defendant does not offer any novel challenge that requires a hearing on the motion, thus the Court rules on the parties' submissions alone, by agreement of the parties. *See United States v. Sebborn*, No. 10-CR-87, 2012 WL 5989813, \*8 (E.D.N.Y. Nov. 30, 2012) ("This Court . . . sees no need to hold a separate *Daubert* hearing. This Court has reviewed the opinions in *Otero*, *Taylor*, *Diaz*, and *Monteiro*, and is persuaded by those thorough and well-reasoned decisions that ballistics testimony of the sort proffered in this case is admissible under *Daubert*.").

should fall within one of four categories: (1) identification, meaning that the pieces of evidence come from the same source; (2) elimination, meaning that they come from different sources; (3) inconclusive, meaning there is not enough evidence for the examiner to reach either of the first two conclusions; and (4) unsuitable, meaning that the recovered evidence lacks discernable class and individual characteristics. *United States v. Shipp*, 422 F. Supp. 3d 762, 771 (E.D.N.Y. 2019) (internal citations omitted).

The theory relies upon the premise that “tools used in the manufacture of a firearm leave distinct marks on various firearm components, such as the barrel, breech face or firing pin.” *United States v. Otero*, 849 F. Supp. 2d 425, 427 (D.N.J. 2012). The theory further posits that:

[T]he marks are individualized to a particular firearm through changes the tool undergoes each time it cuts and scrapes metal to create an item in the production of the weapon. Toolmark identification thus rests on the premise that any two manufactured products, even those produced consecutively off the same production line, will bear microscopically different marks. With regard to firearms, these toolmarks are transferred to the surface of a bullet or shell casing in the process of firearm discharge. Depending on the tool and the type of impact it makes on the bullet or casing, these surface marks consist of either contour scratch lines, known as striations (or striae), or impressions. For example, rifling (spiraled indentations) inside of a gun barrel will leave raised and depressed striae, known as lands and grooves, on the bullet as it is fired from the weapon, whereas the striking of the firing pin against the base of the cartridge, which initiates discharge of the ammunition, will leave an impression but not striae.

Comparing a test bullet or cartridge fired from a firearm of known origin to another bullet or cartridge of unknown origin, the examiner seeks to determine congruence in the pattern of marks left on the examined specimens. This process is known as “pattern matching.” . . . An examiner observes three types of characteristics on spent bullets or cartridges: class, subclass and individual. Class characteristics are gross features common to most if not all bullets and cartridge cases fired from a type of firearm, for example, the caliber and the number of lands and grooves on a bullet. Individual characteristics are microscopic markings produced in the manufacturing process by the random imperfections of tool surfaces (the constantly changing tool as described above) and by use of and/or damage to the gun post-manufacture. According to the theory of toolmark identification espoused by the Association of Firearms and Toolmarks Examiners (“AFTE”), individual characteristics “are unique to that tool and distinguish it from all other



tools.” Subclass characteristics generally fill the gap between the class and individual characteristics categories. They are produced incidental to manufacture but apply only to a subset of the firearms produced, for example, as may occur when a batch of barrels is formed by the same irregular tool.

*Id.* at 427–28 (quoting *Theory of Identification as it Relates to Toolmarks*, 30 AFTE J. 1, 87 (Winter 1998)).

The AFTE theory of toolmark comparison permits an examiner to conclude that two bullets or two cartridges are of common origin if the microscopic surface contours of their toolmarks are in “sufficient agreement.” In turn, “sufficient agreement” requires:

significant duplication of random toolmarks as evidenced by the correspondence of a pattern or combination of patterns of surface contours. Significance is determined by the comparative examination of two or more sets of surface contour patterns comprised of individual peaks, ridges and furrows. Specifically, the relative height or depth width, curvature and spatial relationship of the individual peaks, ridges and furrows within one set of surface contours are defined and compared to the corresponding features in the second set of surface contours. Agreement is significant when the agreement in individual characteristics exceeds the best agreement demonstrated between toolmarks known to have been produced by different tools and is consistent with agreement demonstrated by toolmarks known to have been produced by the same tool. The statement that “sufficient agreement” exists between two toolmarks means the agreement of individual characteristics is of a quantity and quality that the likelihood another tool could have made the mark is so remote as to be considered a practical impossibility.

Ass’n of Firearm & Tool Mark Examiners, *Theory of Identification as it Relates to Tool Marks: Revised*, 43 AFTE J. 287 (2011); see also Keith L. Monson, et al., *Planning, Design and Logistics of a Decision Analysis Study: The FBI/Ames Study Involving Forensic Firearms Examiners*, Forensic Sci. Int’l: Synergy 4 (2022) (hereinafter “Monson et al.”) (“The Theory allows for an opinion of common origin (identification) when the surface contours of two toolmarks are in ‘sufficient agreement.’ Sufficient agreement is decided when the level of microscopic agreement is similar to the microscopic agreement seen from specimens known to have originated from the same source and exceeds microscopic agreement occurring between the Best-Known Non-Match (worst case scenario).”). The AFTE agrees that the interpretation of individualization/identification is subjective in nature, although

it emphasizes that it remains “founded on scientific principles and based on the examiner’s training and experience.” 43 AFTE J. 287 (2011).

Here, the Government intends to call an expert witness named Marc Pomerance who is a Forensic Scientist III with the Firearms and Toolmark Section of the Illinois State Police Forensic Science Center at Chicago. [101-1] at 1. Based upon his expertise, he will testify that he employed AFTE methodology (including the use of peer review, [101] at 10), and found that the shell casings (recovered from the November 22, 2016 shooting incident) matched the known shell casings fired from a firearm (which was recovered by law enforcement from Defendant’s residence at 8015 South Ingleside Avenue, Apartment 2A in Chicago, Illinois). [101] at 3–4; [101-1] at 4. As confirmed at the August 22, 2025 status hearing, however, the Government will not ask Pomerance to provide any expert opinions about the ownership of the firearm, Defendant’s alleged ties to the search warrant residence, or the events of the shooting incident itself. [101] at 2; [110] Hearing Transcript.

### **c. Rule 702 Analysis**

Federal Rule of Evidence 702 provides that a person may testify as an expert if: (1) the testimony will “help the trier of fact to understand the evidence or to determine a fact in issue”; (2) the testimony is “based on sufficient facts or data”; (3) the testimony is “the product of reliable principles and methods”; and (4) the expert has “reliably applied the principles and methods to the facts of the case.” Fed. R. Evid. 702. Under this rule, the district courts serve a gatekeeping function to prevent the admission of irrelevant or unreliable testimony. *See Daubert*, 509 U.S. at 597; *Lapsley v. Xtek, Inc.*, 689 F.3d 802, 809 (7th Cir. 2012). The proponent of the evidence bears the burden of establishing its admissibility by a preponderance of the evidence. *See Lewis v. CITGO Petroleum Corp.*, 561 F.3d 698, 705 (7th Cir. 2009). So long as the proponent establishes a threshold level of reliability and relevance, then the testimony is admissible under Rule 702. *Daubert*, 509 U.S. at 596.

Defendant does not challenge Pomerance’s expert qualifications, [98-2] at 5, and makes no specific objection to the testimony’s relevance (beyond his shell casing argument addressed above), *see generally* [98-2]. Nor could he raise such challenges successfully, since the Government has easily satisfied its burden as to those issues. Pomerance is appropriately credentialed, *see* [101-1] at Exhibit A, employed AFTE methodology, and intends to provide testimony that is highly relevant both to Count Four (felon in possession of a firearm). *See supra* Part I.

In his written motion, however, Defendant attacks Pomerance’s testimony under the third factor for Rule 703: whether the science Pomerance employed is the product of reliable principles and methods.



To evaluate the general reliability of expert testimony, *Daubert* provided a list of five factors that a court may consider: (1) whether a method can or has been tested; (2) the known or potential rate of error; (3) whether the methods have been subject to peer review; (4) whether there are standards controlling the technique's operation; and (5) the general acceptance of the method within the relevant community. *Daubert*, 509 U.S. at 593–94. This list remains non-exhaustive, however, since “reliability is determined on a case-by-case basis” and the trial court has “the same broad latitude when it decides *how* to determine reliability as it enjoys in respect to its ultimate reliability determination.” *Gopalratnam v. Hewlett-Packard Co.*, 877 F.3d 771, 780 (7th Cir. 2017) (first quoting *C.W. ex rel. Wood v. Textron*, 807 F.3d 827, 835 (7th Cir. 2015) and then *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 142 (1999)).

Before turning to any enumerated factors, this Court addresses Defendant's general argument about the reliability of the AFTE method. Here, Defendant challenges the fundamental premises of the discipline itself as a scientific matter, [98-2] at 7–9, based upon two reports: (1) a 2009 report published by the National Academy of Sciences, which called for further research in firearms/toolmarks analysis; and (2) a 2016 report by the President's Council of Advisors in Science and Technology (“PCAST”), which likewise challenged firearms/toolmarks analysis. See Nat'l Rsch Council, *Strengthening Forensic Science in the United States: A Path Forward* (2009) (“2009 NRC Report”); PCAST, *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods*, (2016); see also Nat'l Rsch Council, *Ballistics Imaging Report* (2008) (“2008 NRC Report”) (cited by the 2009 NRC Report for the same points).<sup>5</sup> Defendant argues that these two reports undermine the admissibility of firearms/toolmarks expertise. Not so.

The courts have considered the matter for well over a decade, and no court has categorically excluded this type of testimony based upon these two reports. See *United States v. Harris*, 502 F. Supp. 3d 28, 35 (D.D.C. 2020) (“[T]he 2008 Ballistic Imaging Report and the 2009 National Academy of Science Report are both ‘outdated by over a decade’ due to intervening scientific studies and as a result have been repeatedly rejected by courts as a proper basis to exclude firearm and toolmark identification testimony.”); *United States v. Lee*, No. 16-CR-641, 2022 WL 3586164, at \*7 (N.D. Ill. Aug. 22, 2022) (following the 2008 and 2009 NRC Reports and other critical commentary, courts “unanimously continue to allow firearms identification testimony, finding that cross examination, as opposed to exclusion, is the appropriate remedy to counter the criticisms”); *United States v. Harris*, 502 F. Supp. 3d 28, 32–33 (D. D.C. 2020) (issues raised by PCAST report “are for cross-examination, not

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<sup>5</sup> The 2008 NRC Report indicated that “the validity of the fundamental assumptions of uniqueness and reproducibility has not yet been fully demonstrated,” and called upon the field to generate further validation studies. *Id.* at 81. Nonetheless, it also acknowledged that “firearms-related toolmarks are not completely random and volatile; one can find similar marks on bullets and cartridge cases from the same gun.” *Id.* at 3.

exclusion”). Notably, the Seventh Circuit has affirmed a district court’s decision not to give the NRC reports and PCAST dispositive weight as to admissibility. *United States v. Brown*, 973 F.3d 667, 703–04 (7th Cir. 2020).

Overall, for the reasons discussed below and despite the dubious arguments raised by the 2009 NRC Report and 2016 PCAST Report, this Court finds that the proffered ballistics expertise meets the reliability requirements of *Daubert* and Rule 702. As discussed further herein, numerous studies, including those conducted in the time since the reports were released, have continued to bolster the underlying premises of the field. The Court now turns to a review of the *Daubert* factors to further explain its reliability analysis.

### 1. Testability Factor

The first *Daubert* factor asks whether a technique “can be (and has been) tested.” *Daubert*, 509 U.S. at 592. As described in the Advisory Committee Notes to Rule 702, “testability” refers to “whether the expert’s theory can be challenged in some objective sense, or whether it is instead simply a subjective, conclusory approach that cannot be reasonably assessed for reliability.” Testability enables meaningful cross-examination, for while it is impossible to disprove an unfalsifiable proposition, test results can be presented to a jury for evaluation.

AFTE theory can be (and has been) tested. As the Government points out, numerous validation studies have examined the method’s propositions. *See Otero*, 849 F. Supp. 2d at 432 (collecting studies); Monson et al. at 2–3 (providing an overview of recent work in the field). Indeed, multiple studies “have been published documenting the ability of F/T examiners to correctly identify breech face marks after repetitive firings of the same firearm and to differentiate and identify those produced from consecutively manufactured slides or breech bolts. Other studies have investigated the ability of F/T examiners to correctly identify bullets fired from the same barrel and to distinguish those fired from consecutively manufactured barrels.” Monson et al. at 3. Validation studies have probed not only the average case but have specifically chosen consecutively manufactured items for study “because they are universally acknowledged to present the greatest challenge to distinguish due to their similarity in individual characteristics and likelihood of exhibiting subclass characteristics.” *Id.*

Defendant fails to develop any argument regarding this testability factor nor cites to a single case supporting that AFTA cannot be tested.<sup>6</sup> On the contrary, the

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<sup>6</sup> Since Defendant fails to develop any argument regarding the five factors, the Court considers the argument waived. *Braun v. Village of Palatine*, 56 F.4th 542, 553 (7th Cir. 2022) (“A litigant ‘waives an argument by failing to make it before the district court.’ This rule applies when ‘a party fails to develop arguments related to a discrete issue’ . . . .”) (first citing *Alioto v. Town of Lisbon*, 651 F.3d

Seventh Circuit, and numerous other courts, has affirmed district court findings that AFTE methodology is testable. See *Brown*, 979 F.3d at 704 (affirming district court's finding that the "AFTE method has been tested"); Colonel (Ret.) Jim Agar, *The Admissibility of Firearms and Toolmarks Expert Testimony in the Shadow of PCAST*, 74 Baylor L. Rev. 93 (2022) (concluding that virtually every court to consider the testability question has found AFTE theory testable). This factor, then, weighs in favor of the admissibility of the proffered firearms/toolmarks expert testimony.

## 2. Error Rate Factor

The second *Daubert* factor considers whether the technique has a high "known or potential rate of error." *Kumho Tire Co.*, 526 U.S. at 149. In the firearms/toolmarks context, the critical inquiry under this factor "is the rate of error in which an examiner makes a false positive identification, as this is the type of error that could lead to a conviction premised on faulty evidence." *United States v. Harris*, 502 F. Supp. 3d 28, 39 (D.D.C. 2020).

The Supreme Court has not put a precise number on what constitutes too "high" a rate of error. Certainly, perfection is not required, for expert testimony "is still testimony, not irrefutable fact, and its ultimate persuasive power is for the jury to decide." *Brown*, 973 F.3d at 704. In *Brown*, the Seventh Circuit affirmed the district court's decision that the error rates associated with AFTE methodology do not place it beyond the pale, noting that "although the error rate of this method varies slightly from study to study, overall it is low—in the single digits." *Id.*

In this case, the Defendant suggests that the field has not established an error rate. [98-2] at 10. But the Government cites several studies that establish a low rate of error. See Monson et al. (collecting studies which place the error rate in the low single digits); *United States v. Cloud*, 576 F. Supp. 3d 827, 843 (E.D. Wash. 2021) (noting that the recent FBI/Ames study described in Monson et. al. produced an estimated false positive error rate in the 0.933%–1.57% range); *Otero*, 849 F. Supp. 2d at 433–34 (finding that proficiency testing data gave rise to error rates between 0.9% and 1.5%).

Defendant does not cite any competing studies showing an unacceptably high rates of error, nor does Defendant offer any meaningful critique of the Government's

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715, 720 (7th Cir. 2011); and then citing *Lekas v. Briley*, 405 F.3d 602, 614 (7th Cir. 2005) (finding waiver because party "did not present legal arguments or cite relevant authority to substantiate that claim")) (citations omitted); see also *United States v. Useni*, 516 F.3d 634, 658 (7th Cir. 2008) ("It is not the obligation of this court to research and construct the legal arguments open to parties, especially when they are represented by counsel.") (quoting *Sanchez v. Miller*, 792 F.2d 694, 703 (7th Cir. 1986)). Even if not waived, for the reasons described here, the Court finds the Government's proffered expert witness meets the requirements of *Daubert*.

cited studies sufficient to cast doubt on their reliability.<sup>7</sup> While studies differ in their precise estimations of error rates, this Court remains satisfied that AFTE methodology gives rise to low rates of error. This factor too, then, supports admissibility.

### 3. Peer Review and Publication Factor

The next *Daubert* factor asks whether the methodology employed is subject to peer review and publication. *Daubert*, 509 U.S. at 594. While this factor is far from a prerequisite to admissibility, in this case, the Government has shown that the methodology has undergone significant peer review processes. As the Seventh Circuit noted in *Brown*, “three different peer-reviewed journals address the AFTE method.” *Brown*, 973 F.3d at 704. Among these, the Government highlights the AFTE Journal, which focuses specifically on articles, studies, and reports on firearm and toolmark evidence. [101] at 11. Prior to publication, articles are peer-reviewed by experts in the field; following publication, an additional process permits interested persons to comment on published articles. *Otero*, 849 F. Supp. 2d at 433. The Defendant offers no basis to critique these review processes.<sup>8</sup> The Court thus finds the peer review and publication standard factor satisfied.

### 4. Governing Standards Factor

The next *Daubert* factor considers whether the AFTE methodology provides standards to govern the technique’s operation. *Daubert*, 509 U.S. at 594. As described above, AFTE theory employs the “sufficient agreement” standard, which relies upon an examiners’ background and training to enable them to determine whether matching characteristics exceed the microscopic agreement occurring between the best-known non-match of which they are aware. *Monson et al.* at 2. In addition to the AFTE theory, the Government adds, too, that the examiners in this case also work for accredited laboratories with their own procedural requirements, including documentation and peer review of any identifications. [101] at 12.

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<sup>7</sup> Other courts have entertained countless arguments regarding study designs, the need for black-box studies in the field, and the like. While Defendant does not levy any specific critiques regarding study design here, the Court notes the amount of research that has been conducted in response to the NRC Reports and other critiques and finds that recent research, including several black-box studies, bolsters the reliability of low estimated error rate in this field. See *Monson et al.* at 2–3 (describing recent research in the field and addressing critiques regarding the lack of black-box studies and double-blind assessments); *Cloud*, 576 F. Supp. 3d at 842 (E. D. Wash. 2021) (identifying four recent black-box studies).

<sup>8</sup> As already noted, a party waives undeveloped arguments. *Schaefer v. Universal Scaffolding & Equip., LLC*, 839 F.3d 599, 607 (7th Cir. 2016) (“Perfunctory and undeveloped arguments are waived, as are arguments unsupported by legal authority.”).

Even though the “sufficient agreement” standard contains a degree of intrinsic subjectivity, this does not undermine the reliability or admissibility of the proffered testimony. As *Kumho Tire* made clear, *Daubert* applies to all kinds of expertise, whether rooted in scientific testing or experience-based observation. See *Kumho Tire*, 526 U.S. at 152. Firearm identification evidence “straddles the line between testimony based on science and experience,” *Monteiro*, 407 F. Supp. 2d at 365, but that fact does not render it inadmissible.

Given the rigor of the underlying analysis and methodology, as well as the nature of the proffered opinions—that the experts would not expect, based upon their training and experience, for another firearm to produce the makings observed—the Court finds that this factor does not help Defendant either.

## **5. General Acceptance Factor**

The last *Daubert* factor considers whether AFTE methodology enjoys “general acceptance” in the relevant scientific or technical community. *Daubert*, 509 U.S. at 593–94. The requisite standard is general—not universal—acceptance; and the courts routinely find competing methodologies reliable.

The AFTE methodology is the primary approach in the field. See *Agar* at 162. Numerous colleges and universities offer courses in firearm and toolmark identification. See *United States v. Wrensford*, No. 13-CR-0003, 2014 WL 3715036 at \*13 (D.V.I. Jul. 28, 2014). Crime labs undergo accreditation processes, and examiners employing AFTE methodology in those laboratories are subject to routine proficiency testing. See *Agar* at 162. Put simply, these are the hallmarks of general acceptance.

While a few critics have called for further research to support the foundations of the methodology, nothing in the record suggests that the “tides have turned” such that the AFTE methodology lacks general acceptance. A methodology need not be free from critique to satisfy this *Daubert* factor. After all, *Daubert* emphasized that “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are traditional and appropriate means of attacking” potential weaknesses or limitations in evidence. *Daubert*, 509 U.S. at 596. AFTE remains the dominant approach in the field, and thus this Court easily concludes that the general acceptance factor has been satisfied and supports admissibility.

## **6. Weighing the Factors**

Finding the AFTE methodology testable, supported by a low error rate, subject to peer review and publication, and generally accepted in the relevant field, and further finding that the governing standards employed in the process do not render firearms/toolmarks identification an inappropriate area for the expert testimony proffered in this case. As such, this Court concludes that the Government has met


its reliability burden under *Daubert*, and thus will permit the firearms/toolmarks expert to testify at trial.

### **III. Conclusion**

For the reasons described above, the Court denies Defendant's oral objection to the shell casing evidence, and denies Defendant's motion for leave to file, [98], and, in the alternative, denies Defendant's motion to bar the expert testimony under *Daubert*, [98-2].

Date: August 25, 2025

ENTERED:

  
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John Robert Blakey  
United States District Judge